

Application No.: 10/074,151

Docket No.: JCLA5041-CA2

In The Claims:

Claims 1-3 (Canceled)

Claim 4 (Currently amended): A method for treating a silicon substrate having a surface, comprising:

providing a pre-processing chamber, wherein the ~~pm~~-processing pre-processing chamber has first and second power supplies for sputtering argon therein, wherein the first power supply can provide the argon with a first bias, and the second power supply can provide the silicon substrate with a second bias;

placing the silicon substrate into the pre-processing chamber;

providing the first bias to the argon;

providing the second bias to the silicon substrate;

modifying the first bias and the second bias to sputter the argon to simultaneously dry clean and amorphize the substrate surface;

forming a metal film on the amorphized substrate surface;

performing an annealing step, so that the metal film is reacted with the substrate surface to form a metal silicide layer; and

removing the metal film which is not reacted with the substrate surface.

Claims 5 and 6 (Canceled)

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Claim 7 (Previously amended): The method of claim 4, wherein dry cleaning and amorphizing the substrate surface and forming the metal film are performed within the same chamber.

Claim 8 (Canceled)

Claim 9 (Previously amended): The method of claim 4, wherein the metal film is deposited in the pre-processing chamber.

Claim 10 (Canceled)

Claim 11 (Previously amended): The method of claim 4, wherein the metal film is made of cobalt (Co).

Claim 12 (Previously amended): The method of claim 4, wherein the metal film is deposited by TiCl₄-based CVD.

Claim 13 (Previously amended): The method of claim 4, wherein the metal film is formed on the amorphized substrate surface at a temperature of about 540°C.